Computer Science

ONE STEP TOWARD THE PAPERLESS CLASSROOM

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In today's universities most of the courses are going paperless to embrace technology and to save some money as well. Students can view grades, take online quizzes, have online discussions, talk on message boards, and get and submit assignments all online without using any paper. There are two notable products that are designed for this new paperless classroom, Black Board (www.blackboard.com) and WebCT (www.webct.com). Both of these products are widely used by universities to organize on-line resources for their students. These programs have lots of features that help students and teachers alike but that same multitude of 'features' can also become a disadvantage. With so many options designed to meet many needs, these programs become bloated and not very customizable. The programs can make it cumbersome to present grades and post online quizzes because of their rigidity. The project I created for the UW-Oshkosh Computer Science department satisfies a need for a simpler and more flexible interface.

The first goal in my project was to allow professors to post grades for thier students. In Black Board and WebCT the professor has to manually enter each grade for each student. That can get quite tedious when the professor has a large number of students. Since most professors have their grades in some sort of spreadsheet program, I chose to use that to post their grades online. The professor can simply upload their current grades for the course, following simple guidelines. Thus the grades can be posted instantly instead of having to use a Web interface to enter each grade for each student for each assignment. This method of uploading grades makes use of the same spreadsheet software most professors use to keep track of grades initially to upload their grades to a Web server accessible by their students.

Another tedious problem BlackBoard and WebCT is administering online quizzes. In order to add quizzes for students, instructors are often required to cut-and-paste from a word processing document, in which they have prepared the quiz, into a collection of files on a Web-based form. This process can make it more time consuming to load a quiz into the system that it was to initially create the quiz in the word processor. An easier way of doing this is to allow the professor to merely upload an HTML page that contains the formatted quiz. My quiz system can use the HTML tags to format the quiz. With some simple tags needed for parsing, my system takes a HTML quiz file and adds the questions and answers to the database. Whenever professors need to upload a quiz they simply need to create a HTML file with the formatting they want and upload it instead of filling out many web forms.

This entire application was created using PHP and MySQL as a back end database. The PHP is perfect for creating dynamic webpages because each class will have different quizzes and grades that they will see. PHP also works great with MySQL in creating a database driven web application. The database functions as a backbone of the project making data easily accessible for administering quizzes to students and displaying their grades. Since more than one professor can use this system use of primary and foreign keys is a must in order to keep each professor's class seperate. PHP was also very helpful in parsing the files uploaded to the project by providing powerful string comparison tools.

In conclusion, my project does not have nearly the options of Black Board and WebCT but it makes the more commonly used options easier to use for someone with knowledge of spreadsheets and HTML. My project makes the life of the professor easier while giving the same usability of a paperless quizzes and grade posting.